ail Label No : El 715813889US

		Ex	Expre Mail Label No.: EL715813889US						
FORM PTO-1449			Docket Number (Optional) 81858.0019		Application Number Not Assigned				
INFORMATION DISCLOSURE CITATION IN AN APPLICATION			Applicant Alvin M. Despain, et al.			1669 1669 10/01			
(Use several sheets if necessary)			Filing Date Herewith	1	Group Art Unit 265126				
U.S. PATENT DOCUMENTS									
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE			
QQ	4,404,676	09-13-83	DeBenedictis			/			
DD	4,816,938	03-28-89	Cowen, et al.						
DD	4,920,442	04-24-90	Dimmick						
D	5,189,572	02-23-93	Gooch			}			
DD	5,233,487 √	08-03-93	Christensen, et al.						
DD	5,523,902	06-04-96	Pederson			;			
DD	5,541,783	07-30-96	Yamamoto, et al.						
DD	5,585,975	12-17-96	Bliss			,			
DD	5,668,678	09-16-97	Reed, et al.			,			
DD	5,677,809	10-14-97	Kadlec						
FOREIGN PATENT DOCUMENTS									
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION (YES/NO)			
DD	PCT/US/99/26036 (International Search Report)	03-13-00	PCT						
DD	JP 61104358	05-22-86	Japan			Abstract Only			
DD	JP 10011844	01-16-98	Japan			Abstract Only			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)									
	G. F. Franklin, et al., " Design of a I	Disk Drive Servo:	A Case Study," Digital	Control of Dy	namic Systems	3 rd Edition,			
DD	pp. 649-689, 1998								
DD	E. Grochowski, et al., "Future Trends In Hard Disk Drives," IEEE Transactions on Magnetics, Vol. 32, pp. 1850-1854, 1996								
DD.	S. E. Baek, "Design of a Multi-Rate Estimator And Its Application to a Disk Drive Servo System," Proc. Amer. Contr. Conf., San Diego, CA, pp. 3640-3644, June 1999								
DD	X. Hu, et al., "Discrete-Time LQG/LTR Dual-Stage Controller Design And Implementation For High Track Density HDDs," Proc. Amer. Contr. Conf., San Diego, CA, pp. 4111-4115, June 1999								
DD	S. Hara, et al., "Two-Degree-of-Freedom Controllers For Hard Disk Drives With Novel Reference Signal Generation," Proc. Amer. Confr., San Diego, CA, pp. 4132-4136, June 1999								
DO	M. T. White, et al., "Rejection of Disk Drive Vibration And Shock Disturbances With a Disturbance Observer," Proc. Amer. Contr. Conf., San Diego, CA, pp. 4127-4131, June 1999								
EXAMINER	DATE CONSIDERED 10/22/02								
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.									



Expre Mail Label No.: EL715813889US

FORM PTO-1449 Docket Number (Optional) Application Number 09/991 Not Appligned 81858.0019 **Applicant** INFORMATION DISCLOSURE CITATION IN AN APPLICATION Alvin M. Despain, et al. Filing Date 1/21/6\ **Group Art Unit** (Use several sheets if necessary) Herewith_ 2651 **U.S. PATENT DOCUMENTS EXAMINER FILING DATE IF CLASS SUBCLASS** DOCUMENT NUMBER DATE NAME APPROPRIATE INITIAL 5,754,353 05-19-98 Behrens, et al. $\mathcal{D}\mathcal{D}$ 5.796.543 08-18-98 Ton-That DD 10-20-98 Cheung, et al. 5,825,579 DD 11-24-98 5,841,601 Fisher DD Blank, et al. 5.847.894 12-08-98 DD 06-01-99 Abramovitch, et al. 5,909,661 DD 08-31-99 Schwarz, et al. 5.946.156 $\mathcal{D}\mathcal{D}$ $\mathcal{D}\mathcal{D}$ 5.949.605 09-07-99 Lee, et al. 09-07-99 Brown, et al. DD 5.949.603 FOREIGN PATENT DOCUMENTS **TRANSLATION DOCUMENT NUMBER** DATE COUNTRY **CLASS SUBCLASS** (YES/NO) DD02-06-96 Abstract Only JP 08036811 Japan 03-23-92 Abstract Only JP 04089654 Japan $\mathcal{D}\mathcal{C}$ 01-02-98 DE 197 12 568 A1 Germany DD OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) D. Hernandez, "Dual-Stage Track-Following Servo Design For Hard Disk Drives," Proc. Amer. Contr. Conf., San Diego, CA, pp. 4116-4121, June 1999 J. Li, et al., "Rejection of Repeatable And Non-Repeatable Disturbances For Disk Drive Actuators," Proc. Amer. Contr. DI Conf., San Diego, CA, pp. 3615-3619, June 1999 Y. Huang, et al., "Robustness Analysis on a High Bandwidth Disk Drive Servo System With an Instrumental Suspension," $\mathcal{D}_{\mathcal{L}}$ Proc. Amer. Contr. Conf., San Diego, CA, pp. 3620-3624, June 1999 Y. Huang, et al., "A Novel Disturbance Observer Design For Magnetic Hard Drive Servo System With a Rotary Actuator," $\mathcal{D}\mathcal{D}$ IEEE Transactions on Magnetics, Vol. 34, No. 4, pp. 1892-1894, July 1998 Y. Mizoshita, et al., "Vibration Minimized Access Control For Disk Drives," IEEE Transactions on Magnetics, Vol. 32, No. 3, $D\!D$ pp. 1793-1798, May 1996 L. S. Fan, et al., "Magnetic Recording Head Positioning at Very High Track Densities Using a Microactuator-Based, Two- $\mathcal{D}\mathcal{D}$ Stage Servo System," IEEE Transactions on Industrial Electronics, Vol. 42, No. 3, pp. 222-233, June 1995 W. Guo, et al., "A High Bandwidth Piezoelectric Suspension For High Track Density Magnetic Data Storage Devices," IEEE $\mathcal{D}\mathcal{D}$ Transactions on Magnetics, Vol. 34, No. 4, pp. 1907-1909, July 1998 **DATE CONSIDERED EXAMINER** 10/22/02 EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

			- Avbi	Cita in i	_abo				
FORM PTO-1449			Docket Number (Optional) 81858.0019		Application Number				
INFORMATION DISCLOSURE CITATION IN AN APPLICATION			Applicant Alvin M. Despain, et al.						
(Use several sheets if necessary)			Filing Date 11/21/01 Herewith		Group Art Unit 2651				
U.S. PATENT DOCUMENTS									
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE			
DD	5,163,162	11-10-92	Berry, et al.	<u></u>					
DD	5,724,205	03-03-98	Choi						
<u>AC</u>	6,157,510	12-05-00	Schreck, et al.	-					
DD	5,938,790	08-17-99	Marrow						
DD	5,490,091	02-06-96	Kogan, et al.						
DD	4,816,947	03-28-89	Vinal, et al.						
DD	4,772,963	09-20-88	Van Lahr, et al.		,				
DD	5,717,538	02-10-98	Cheung, et al.						
	,								
FOREIGN PATENT DOCUMENTS									
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION (YES/NO)			
DO	WO 99/36907	7-22-99	PCT						
DD	0 298 475 A1	7-7-88	European						
DD	0 331 189 A2	3-3-89	European						
ÐÞ	DE 39 00 683 A1	07-19-90	Germany						
	OTHER DOCUMENTS (Including Au	thor, Title, Date, Pertine	ent Pages, I	Etc.)				
DD	S. Koganezawa, et al., "Dual-Stage Actuator System For Magnetic Disk Drives Using a Shear Mode Piezoelectric Microactuator," IEEE Transactions on Magnetics, Vol. 35, No. 2, pp. 988-992, March 1999								
DD	K. Mori, et al., "A Dual-Stage Magnetic Disk Drive Actuator Using a Piezoelectric Device For a High Track Density," IEEE Transactions on Magnetics, Vol. 27, No. 6, pp. 5298-5300, November 1991								
ŒŒ	K. K. Chew, "Control System Challenges to High Track Density Magnetic Disk Storage," IEEE Transactions on Magnetics, Vol. 32, No. 3, pp. 1799-1804, May 1996								
<u>A</u> C	L. Guo, "Reducing The Manufacturing Costs Associated With Hard Disk Drives – A New Disturbance Rejection Control Scheme," IEEE/ASME Transactions on Mechatronics, Vol. 2, No. 2, pp. 77-85, June 1997								
DD	S. Finch, et al., "Headerless Disk Formatting: Making Room For More Data," Data Storage, pp. 51-54, April 1997								
DD	S. R. Hetzler, "No-ID Sector Format," IBM Storage, pp. 1-3 January 8, 1996								
EXAMINER Jan Varielson DATE CONSIDERED 10/22/02									
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.									

Express Mail Label No.: EL715813889US **FORM PTO-1449 Docket Number (Optional) Application Number** 81858.0019 na y kassigned INFORMATION DISCLOSURE CITATION **Applicant** Alvin M. Despain, et al. IN AN APPLICATION Filing Date | | | 21/01 (Use several sheets if necessary) **Group Art Unit** -Horowith-2651 **U.S. PATENT DOCUMENTS EXAMINER FILING DATE IF CLASS SUBCLASS DOCUMENT NUMBER** DATE NAME **APPROPRIATE** INITIAL Smith 11-01-77 DD4,056,830 05-20-80 Noble 4,204,234 DD04-24-84 Fujimoto, et al. 4,445,153 $\mathbb{D}^{\mathcal{D}}$ 4,499,510 02-12-85 Harding, et al. $\mathcal{D}\mathcal{D}$ 01-07-86 Cahoon 4,563,713 DD 02-10-87 Vinal 4,642,709 $\mathcal{D}\mathcal{D}$ 4,701,815 10-20-87 Yada, et al. DD DO Watt, et al. 4,890,172 12-26-89 05-08-90 DD 4,924,160 Tung 5,073,834 12-17-91 Best, et al. ΔC 5,499,232 03-12-96 Hardwick $\mathcal{D}\mathcal{D}$ 10-05-99 5,961,658 Reed, et al. QC07-27-99 Lee, et al. 5,930,448 α FOREIGN PATENT DOCUMENTS Translation **CLASS SUBCLASS** DATE COUNTRY **DOCUMENT NUMBER** YES NO OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

L.N. He, et al., "Estimation of Track Misregistration by Using Dual-Stripe Magnetoresistive Heads," IEEE Transactions on Magnetics, Vol. 34, No. 4, pp. 2348-2355, July 1998.

IBM Research, "The Giant Magnetoresistive Head: A Giant Leap for IBM Research," http://www.research.ibm.com/research/gmr.html, pp. 1-2, August 21, 1998.

EXAMINER Jarreleon DATE CONSIDERED 10/22/02

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

DD